Hon. Cesar Rey Hernandez
Department of Education
Box 759
Hato Rey, PR 00919

Hon. Ileana Echegoyen
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Box 21365
San Juan, Pr 00928

Arq. Lillian Rivera Correa
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Santurce, PR 00940

Arq. Enid Torregrosa
State Historic Preservation Office
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Federal Affairs Officer
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Lcdo. Carlos Lopez Freytez
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Box 4184
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Eng. Ramon Amador
PR Infrastructure Financing Authority
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Capital Center 235
Hato Rey, PR 00918-1454

Mr. Jose Martinez Laboy
PR Infrastructure Financing Authority
Capital Center
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Sr. Milton Segarra
Puerto Rico Tourism Company
P.O. Box 902-3960
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Hon. Juan A. Flores Galaarza
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San Juan, PR 00902-4140

Mr. Angel Colon
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Mrs. Angelica Oliver
Centro de Esudios y Recursos Educativios
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San Juan, PR 00919-2296

Mr. Federico Haeussler
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P.O. Box 1632
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Dr. Ariel Lugo
Federal Forest Service
P.O. Box 25000
San Juan, PR 00928

Mr. Juan Martinez
National Resources Conservation Service
Caribbean Area
P.O. Box 364868
San Juan, PR 00936

Mr. Miguel Rolon
Caribbean Fishery Management Council
268 Munoz Rivera Avenue
Suite 1108
San Juan, PR 00907-4127

Eng. Carl Axel Soderberg
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Centro Europa Building Suite 417
1492 Ponce de Leon Avenue Stop 22
Santurce, PR 00907-4122

Mr. Jose Bravo
Federal Emergency Management Agency
P.O. Box 70105
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Mr. Michael Colon
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Land Administration Building
171 Chardon Avenue
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Dr. Mathew Larsen
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Mr. James P. Oland
Caribbean Field Office
U.S. Fish and Wildlife Service
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Mr. Walter Andrews
EPA Region II
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New York, NY 10007-1866

Mr. Andreas Mager, Jr.
National Marine Fisheries Service
Habitat Conservation Division
Southeast Regional Office
9721 Executive Center Dr. N
St. Petersburg, FL 33702

Mr. Sam Hamilton
U.S. Fish and Wildlife Service
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Mr. Mike Johnson
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District Chief Caribbean District
USGS Water Resources Division
GSA Center
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Hon. Jorge Santini
Mayor, City of San Juan
P.O. Box 9024100
San Juan, Puerto Rico 00902-4100

Elsa Jimenez, Public Affairs
CESAJ-DS-PA
U.S. Army Corps of Engineers
Antilles Office
400 Fernandez Juncos
San Juan, PR 00901-3299

Mr. Charles Oravetz
Protected Resources Division
9721 Executive Center Dr. N
St. Petersburg, FL 33702

Mr. Gary D. Fracer
Department of the Interior
1849 C. Street NW
Room 3242
Washington, DC 20240

Director San Juan Office
USDA Natural Resources Conservation Services
G.P.O. Box 4868
San Juan, PR 00936

Mr. Michael Colon
Department of Housing and Urban Development
159 Avenida Chardon
New San Juan Building Office 305
San Juan, PR 00918-1804

Agustin Carbo
San Juan Bay Estuary Program
400 Fernandez Juncos Ave.
San Juan, PR 00901

Ms. Mayra Vega
Executive Director
San Juan Bay Estuary Program
400 Avenida Fernandez Juncos, 2nd Floor
San Juan, PR 00901-3299

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P. O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

Planning Division
Environmental Branch

JUN 04 2002

To Whom It May Concern:

The Jacksonville District, U.S. Army Corps of Engineers, is gathering information to define issues and concerns that will be addressed in an Environmental Assessment (EA) being prepared for maintenance dredging in San Juan Harbor, San Juan, Puerto Rico. As shown on the enclosed location and vicinity map, San Juan Harbor is located on the northeastern coast of Puerto Rico.

The proposed maintenance dredging areas that will be addressed in the EA include the Graving Dock Turning Basin and Berthing Areas 15 and 16 (see enclosure for the dredging area location). Approximately 300,00 cubic yards of material would be dredged from the proposed areas.

The sediments in the Graving Dock Turning Basin and adjacent Berthing Areas, 15 and 16, have been determined to be contaminated with heavy metals, polyaromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs). Therefore, the dredged material will be disposed in a Contained Aquatic Disposal (CAD) facility. The dredging plan includes hydraulic dredging and pipeline pumping, via the Martin Pena Canal, of all dredged material into one or more existing CAD pits within the San Jose Lagoon (see enclosure for pipeline route and disposal site).

We welcome your views, comments and information about environmental and cultural resources, study objectives and any suggested improvements. Letters of comment or inquiry should be

addressed to the letterhead address to the attention of Ms. Yvonne Haberer, Planning Division, Environmental Branch and received by this office within thirty (30) days of the date of this letter. Ms. Haberer can also be reached at 904-232-1701.

Sincerely,

James C. Duck
Chief, Planning Division

Enclosure

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive N.
St. Petersburg, Florida 33702
(727) 570-5317, FAX 570-5300

June 20, 2002 F/SER4:LC

James C. Duck
Chief, Planning Division
Jacksonville District
U.S. Army Corps of Engineers
PO Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Duck:

The National Marine Fisheries Service (NMFS) has received your June 4, 2002, letter concerning the preparation of an Environmental Assessment (EA) for maintenance dredging in the San Juan Harbor, San Juan, Puerto Rico. You have requested our views, comments, and information about cultural and environmental resources, study objectives, and suggested improvements.

Based on the information contained in your cover letter, only maintenance dredging activities proposed for the area of the Graving Dock Turning Basin and Berthing Areas 15 and 16 will be addressed in the EA. Because dredging and harbor improvements are planned throughout the San Juan Harbor as part of the San Juan Harbor Federal Navigation Project (SJHFNP), the NMFS believes that the project scope should be expanded. We suggest that a single EA be prepared that includes all activities planned within the San Juan Harbor that could affect Essential Fish Habitat (EFH) or fishery species managed by the NMFS or the Caribbean Fishery Management Council. For instance, the map included with your cover letter indicates that a pipeline will be constructed to pump dredged sediments from the Graving Dock Turning Basin and Berthing Areas 15 and 16 to a site in the San José Lagoon through the Martín Peña Channel. The Martin Pena Channel and San Jose Lagoon are lined by mangroves. Mangroves and soft bottom coastal lagoons are categories of EFH. Maps from the San Juan Bay Estuary Program and NOAA's National Ocean Service indicate that other categories of EFH, such as seagrass beds and macroalgal plains are present in the harbor area where further dredging activities are planned based on the Limited Reevaluation Report recently prepared by the Jacksonville District Corps of Engineers (COE).

Federally-managed species known to occur within the San Juan Bay, Martín Peña Channel, and San José Lagoon include horse eye jack, schoolmaster, gray snapper, dog snapper, lane snapper, doctorfish, and yellowtail snapper. Of these species, juvenile and adult schoolmaster and gray snapper are known to utilize mangroves. Further, the entire Federal navigation project, including the area to be dredged and the disposal site for the dredged material, are located within the San Juan Bay Estuary system. Estuaries have been designated as EFH Habitat Areas of Particular Concern

due to their susceptibility to human-induced degradation, ecological importance, or location in an environmentally stressed area. Thus, the EA should discuss in detail the potential direct, indirect, and cumulative impacts to EFH due to harbor improvements and port operations throughout the area affected by the SJHFNP.

Due to the importance of fishery resources within San Juan Bay, the NMFS is concerned about the proposal to construct a pipeline through Martín Peña Channel to the San José Lagoon and the disposal of dredged material. The EA should provide details of pipeline construction, including anticipated impacts to the mangrove forest, as well as alternatives, if any, for transporting the dredged material to the disposal site. In addition, to our knowledge, there is no Contained Aquatic Disposal facility within the San Jose Lagoon. Thus, the EA should provide details regarding the methods of minimizing turbidity, confining contaminated sediments dredged from the area of the Graving Dock Turning Basin and Berthing Areas 15 and 16, and alternatives for upland disposal of contaminated sediments.

Mitigation plans for unavoidable impacts to EFH should be included in the EA. Past correspondence from the COE described in-bay mitigation consisting of the construction of a dredged material island for the portion of the Federal navigation project. That project also included the dredging of the Graving Dock Channel and Puerto Nuevo Channel. It is our understanding that dredging activities have taken place, but no in-bay mitigation was performed. If this mitigation is no longer planned, the COE should develop new mitigation strategies.

In summary, to satisfy the EFH consultation provisions of the Magnuson-Stevens Fishery Conservation and Management Act specified in 50 CFR 600.920 of the final rule, the EA should include details of the entire SJHFNP, including all planned deepening and maintenance dredging; an evaluation of the impacts of the project on EFH, managed species, and associated species by life history stage; Federal agency's views regarding the effects of the action on EFH; and proposed mitigation. In addition to the EFH consultation requirement, the Federal action agencies must consult with NMFS's Protected Resources Division (PRD) on the potential effects of the proposed action on threatened and endangered species. The NMFS's PRD biologist for the project area is Mr. Eric Hawk, who may be reached at the letterhead address or at 727-570-5312.

We appreciate the opportunity to provide these comments.

Questions related to the proposed project and marine fishery resource issues should be directed to Dr. Lisamarie Carrubba in our Cabo Rojo, Puerto Rico, office at 787/851-3700.

Sincerely,

Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Boqueron Field Office
Carr. 301, KM 5.1, Bo. Corozo
P.O. Box 491
Boqueron, PR 00622

June 18, 2002

Mr. James Duck
Chief, Planning Division
US Army Corps of Engineers
PO Box 4970
Jacksonville, FL 32232-0019

Re: Scoping for the San Juan Harbor Graving Dock Turning Basin Maintenance Dredging

Dear Mr. Duck:

The Corps is requesting comments and concerns for the proposed dredging of the Graving Dock Turning Basin and Berthing Areas 15 & 16 in San Juan Bay. The sediments in this area have been identified as being contaminated with metals, PAH's, and PCB's. The Corps is proposing to dispose of these sediments in a Contained Aquatic Disposal (CAD) facility located in San Jose Lagoon. To our knowledge such a facility does not exist. If the Corps is going to construct such a facility the EA must cover all aspects. From the information provided it seems that the Corps is proposing to use existing depressions in San Jose Lagoon as their CAD facility. These depressions were created by dredging operation in the past and have left anoxic depressions well below the natural bottom of the lagoon.

The current plan is to hydraulicly dredge the contaminated sediments and pipe them to the CAD pits. There is no mention as to how these sediments will be contained in the pits. This issue needs to be throughly discussed in the EA. San Jose Lagoon is part of the San Juan Estuary Program and is an estuarine lagoon system. The fishery resources of the lagoon are used by artesanal and recreational fishermen making confinement of the sediments during pumping and disposal critical. Although not mentioned in the letter, we assume that the sediments would be contained in some form of geotube like material prior to disposal in the pits.

The Service has always endorsed the filling of the pits in San Jose Lagoon for environmental reasons. However, the project description is not clear on the methodology to be used other than pumping it to the site. Our other concern involves the actual pumping operation. Will the placement of the pipeline require additional removal of mangroves from Caño Martin Peña, will staging areas or other temporary facilities require access to Caño Martin Peña? There will have to be a contingency plan in the event of a pipeline rupture and discharge of contaminated sediments into Caño Martin Peña and surrounding wetlands.

Since the San Juan Bay maintenance project has been ongoing for such a long period of time, and seems to be constantly changing, we recommend that the Corps consider formally re-coordinating this project with the federal resource agencies. The impression is that this project is being carried out in a piecemeal fashion and that over all project impacts are being lost.

Thank you for the opportunity to comment on this action, if you have any questions please contact Felix Lopez of my staff at 787 851-7297 ex 26.

Sincerely,

James P. Oland
Field Supervisor

fhl
cc:
DNER, San Juan
COE, Planning, San Juan
EPA, San Juan
NMFS, Lajas
SJBE, San Juan

GRAVING DOCK

ESTADO LIBRE ASOCIADO DE PUERTO RICO
OFICINA DE LA GOBERNADORA
JUNTA DE CALIDAD AMBIENTAL

21 de junio de 2002

DADA: 2082-02

James C. Duck
Jefe, División de Planificación
Cuerpo de Ingenieros
del Ejército de los Estados Unidos
Avenida Fernandez Juncos # 400
San Juan, Puerto Rico 00901-3299

ASUNTO: DRAGADO DE MANTENIMIENTO
BAHIA DE SAN JUAN
SAN JUAN, PUERTO RICO

Estimado señor Duck:

El Cuerpo de Ingenieros del Ejército de los Estados Unidos (COE por sus siglas en inglés), está en el proceso de preparar una Evaluación Ambiental (EA) para el dragado de mantenimiento de la Bahia de San Juan. El área de dragado propuesta incluye los muelles 15 y 16, así como el área de viraje frente a éstos, los cuales se ha determinado que contienen sedimentos contaminados con metales pesados, hidrocarburos poliaromáticos (PAHs) y bifenilos policlorinados (PCB). Aproximadamente 300,000 yardas cubicas de sedimento serán dragadas de las áreas antes mencionadas y dispuestas mediante bombeo por tuberías a través del Caño Martín Peña, hasta una o mas fosas existentes para disposición de material contenido en bidones (CAD por sus siglas en inglés), en la Laguna San José.

Esta Junta no tiene objeción alguna a la preparación de la EA, siempre que la misma cumpla con las disposiciones del Reglamento de la Junta de Calidad Ambiental para el Proceso de Presentación, Evaluación y Trámite de Documentos Ambientales.

Agradecemos su cooperación para mantener y conservar la calidad de nuestro ambiente.

Cordialmente,

Fernando Guzmán Esquilín
Director Interino
Area de Asesoramiento Científico

(Translation 3 Jul 2002, by e. Jiménez)

COMMONWEALTH OF PUERTO RICO
OFFICE OF THE GOVERNOR
ENVIRONMENTAL QUALITY BOARD

June 21, 2002 DADA-2082-02

James C. Duck
Chief, Planning Division
U.S. Army Corps of Engineers
400 Fernandez Juncos Avenue
San Juan, Puerto Rico 00901-3299

Attention: Mr. Esteban Jiménez

Subject: MAINTENANCE DREDGING
SAN JUAN HARBOR
SAN JUAN, PUERTO RICO

Dear Mr. Duck:

The U.S. Army Corps of Engineers (COE) is preparing an Environmental assessment (EA) for the maintenance dredging of San Juan Harbor. The proposed dredging area includes piers 15 and 16, as well as the turning basins in front of these piers, which have been determined to contain sediments contaminated with heavy metals, polyaromatic hydrocarbons (PAH) and polychlorinated biphenols (PCB). Approximately 300,000 cubic yards of sediment will be dredged from the above mentioned areas and sent by means of a pipeline through Caño Martín Peña to one or more of the existing submerged depressions or sinkholes for the deposition of material contained in drums (CAD) in San José Lagoon.

This Board has no objection to the drafting of an EA as long as this complies with the Regulations of the Environmental Quality Board (EQB) for the Process of Presentation, Evaluation, and Transaction of Environmental Documents

We appreciate your cooperation in maintaining and conserving the quality of our environment.

Cordially,

Fernando Guzmán Esquilín
Acting Director
Scientific Advisory Area

Box 11488
Santurce, Puerto Rico o Telephone 787-767-8181

COMMONWEALTH OF PUERTO RICO
DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES

06 AGO 2002

Mr. James C. Duck
Chief, Planning Division
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Mr Duck:

Environmental Assessment
San Juan Harbor and Berthing Area Maintenance Dredging

This is in response to your request of information, concerns, views, etc. for the development of the Environmental Assessment for the San Juan Harbor Graving Dock Turning Basin and Berthing Areas 15 and 16 Maintenance Dredging.

SJU

The Department of Natural and Environmental Resources, as partner of the San Juan Bay Estuarine Program met with personnel from the Program's office and identified some of the issues that we consider important for the assessment. Most of these issues are already part of the Waterways Experiment Station (CE) experience, as gathered in the publication "Contained Aquatic Disposal of Contaminated Sediments Subaqueous Borrow Pits" by Michael R. Palermo (1997). Hence, we emphasize the following themes, among others, to be addressed from the environmental point of view:

1. Selection of deposition site and number of CADS
2. Effect of water depth at deposition site
3. Benefit of interim caps for minimizing erosion
4. Biological and cultural resources
5. Effects of design, construction, and operation of CADS on environment
6. Effect of types of pipeline placements and order of placements of contaminated sediments
7. Monitoring of all components: biological, chemical, physical, health safety

P.O. BOX 9066600 PTA. DE TIERRA STATION, SAN JUAN, P.R 00906-6600
PHONE (787) 724-8774 FAX. 723-4255

8. Pipeline installation controls, surveillance for leaks, etc.
9. Dredging techniques at the harbor

Should you have any further inquiries, please contact Eng. José M. Lebrón Lastra, Assistant Administrator for the Mineral and Water Resources Area at (787) 725-3856.

Cordially,

Salvador Salas-Quintana
Secretary

JMLL/LSBC/lsbc

COMMONWEALTH OF PUERTO RICO
PUERTO RICO ELECTRIC POWER AUTHORITY

SAN JUAN, PUERTO RICO

CABLE ADRESS
PREPA

P.O. Box 364267
San JUAN, PUERTO RICO 00936-4267

July 19, 2002

Mr. James C. Duck, Chief
Planning Division
Department of the ARMY
P O Box 4970
Jacksonville, Florida 32232-0019

Dear Mr. Duck:

San Juan Harbor Maintenance Dredging, San Juan, Puerto Rico

We are responding to your letter of June 4, 2002, requesting for comments on the above project.

The Puerto Rico Electric Power Authority (PREPA) is planning to construct a 115 kV underground transmission line in the Metropolitan Area. This line will be installed along thirty miles across the Municipalities of Bayamón, Cataño, Guaynabo, San Juan and Toa Baja.

The line will connect thermoelectric plants and key substations and transmission center facilities in the Metropolitan Area to improve the electrical system reliability, especially during hurricane seasons. The funds for this project will be provided by the Federal Emergency Management Agency (FEMA).

This project will be constructed as described below:

1. Phase I- from Monacillo Transmission Center to Hato Rey TC

2. Phase II – from Hato Rey TC to San Juan Steam Plant, including Martín Peña GIS, Viaducto Transmission Center and Isla Grande Transmission Center.

3. Phase III- from San Juan Steam Plant to Palo Seco Steam Plant and from Palo Seco Steam Plant to Bayamón Transmission Center.

4. Phase IV- from Bayamón Transmission Center to Monacillo Transmission Center.

On the phase II, the underground transmission line will cross the Martín Peña Canal, near the San Juan Central Park and Kennedy Avenue. We included the preliminary drawings to ensure that PREPA's project will not interfere with your project.

If you need additional information on this project, please contact Eng. Milagros Calixto at 787-772-6654.

Sincerely,

Edwin Rivera Serrano
Engineering Director

Enclosures 21

c Ms. Yvonne Haberer, Environmental Branch

PUERTO RICO
Compañía de Turismo

July 10, 2002

Mr. James C. Duck
Chief
Planning Division Department of the Army
Jacksonville District Corps of Engineers
PO Box 4970
Jacksonville, Florida 32232-0019

DREDGING IN SAN JUAN HARBOR

Dear Mr. Duck:

According to your letter dated June 4, 2002, the US. Army Corps of Engineers is gathering information to define issues and concerns that will be addressed in an Environmental Assessment being prepared for maintenance dredging in San Juan Harbor.

Two important activities of Puerto Rico's economy are located at San Juan Harbor: the main cruise ship docking facilities of the Island, where almost one million cruise ship passengers arrive each year; and the main shipping port, where almost all the merchandise being exported from or imported to the Island by sea is handled.

For the above mentioned reasons, the Puerto Rico Tourism Company has not objection to this project as it considers the importance of and our interest in the conservation of the service capacity of the Port of San Juan.

Cordially yours,

Carlos Negrón-Roche
Director
Planning

CN/smv

Apartado Postal 902-3960, San Juan, Puerto Rico 00902-3960 • Teléfono: (787) 721-2400 Fax: (787) 722-6352

CN 078-04495
REV. 1/01

COMMONWEALTH OF PUERTO RICO
PUERTO RICO ELECTRIC POWER AUTHORITY
SAN JUAN, PUERTO RICO

www.prepa.com

PO Box 364267
San Juan, Puerto Rico 00936-4267

July 2, 2002

Mr. James C. Duck, Chief
Planning Division
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Mr. Duck:

RE: Dredging in San Juan Harbor
San Juan. Puerto Rico

Reference is made to your letter of June 4, 2002, in which the Puerto Rico Electric Power Authority (PREPA) is requested to comment on the project "Dredging in San Juan Harbor".

PREPA is planning to install an underground 115 kv power line that will pass, at some point, over the Martín Peña Canal. This project, sponsored by the Federal Emergency Management Agency, is on planning stage at this time. For this reason, its very important for PREPA, to know exactly, the date on which the dredging will be initiated and how much time it will take in order to coordinate our efforts with those of your Agency.

Another important issue for PREPA is the impact of the project on the quality of surrounding waters. Contaminants such as heavy metals, polychlorinated byphenyls and hydrocarbons are usually trapped and stabilized within the sediments. The dredging process may release the contaminants from the sediment matrix allowing them to enter the water column. Once in the water column, the contaminants can be transported to locations far from the project site. PREPA's San Juan Thermoelectric Plant's cooling water intake is located south of the proposed project. The discharge of cooling water is permitted under the National Pollutant Discharge Elimination System.

If you need additional information regarding this matter, please contact Eng. Jaime A. Plaza, Head, Environmental Protection and Quality Assurance Division, at (787) 289-4959.

Cordially,

Héctor M. Alejandro, Director
Planning and Environmental Protection

Proyecto Península de Cantera
¡Nuestro Orgullo!

July 1, 2002

Miss Ivonne Hoberer
Planning Division
Department of the Army
Jacksonville District Corp of Engineers
Box 4970 Jacksonville, Florida 32232-0019

Dear Miss Hoberer:

Reference is made to your letter dated June 04, 2002, in which you request our comments in relation to the propose maintenance dredging in the San Juan Harbor, San Juan, Puerto Rico.

The project consist of the dredging of 300,000 cubic yards of contaminated material to be disposed in a Contained Aquatic Disposal (CAD) facility in to one or more existing CAD pits inviting the San José Lagoon.

The Peninsula de Cantera Project is surrounded by the north by the Los Corozos Lagoon, by the east the San José Lagoon, by the south by the Martin Peña Canal and by the east by the Barbosa Avenue. Be cause of its location our Project consider the San José Lagoon and the Martín Peña Canal as a Natural Resource and in our long term planning the intensive recreational uses of both is contemplated.

Our project is also participating with the Puerto Rico Department of Public Works and PR Highway Authority in the proposed channeling of the Martín Peña Canal from the San José Lagoon to the Muñoz Rivera Ave in Hato Rey. In various meetings we have discussed the possibility to dispose the dredging material from the Martín Peña Canal into the existing CAD pits within the San José and Los Corozos Lagoons. We suggest to evaluate the capacity of the CAD pits in both lagoons to determine if both dredgings can be dispose in the Lagoons.

Angel J Colon
Development Coordinator

cc: Lyvia Rodríguez – PR Highway Authority

COMPAÑÍA PARA EL DESARROLLO INTEGRAL DE LA PENINSULA DE CANTERA
PO Box 7187, San Juan, PR 00916-7187 • Tel. (787) 268-3138/728-7641 • Fax: (787) 727-0278/728-7658

ADMINISTRACION DE TERRENOS
ESTADO LIBRE ASOCIADO DE PUERTO RICO

02 JUL 2002

Mr. James C. Duck
Chief, Planning Division
Environmental Branch
Department of the Army
Jacksonville District Corps of Engineers
PO Box 4970
Jacksonville, Florida 32232-0019

Dear Mr. Duck:

SUBJECT: ISSUES DEFINITIONS FOR THE ENVIRONMENTAL ASSESSMENT FOR MAINTENANCE DREDGING OF THE GRAVING DOCK TURNING BASIN AND BERTHING AREAS 15 AND 16 IN THE SAN JUAN HARBOR, SAN JUAN, PUERTO RICO

We acknowledge receipt of your letter dated June 4, 2002, describing the subject project and requesting our comments on the proposed action. After review of the documents, we inform that no property presently owned by the Puerto Rico Land Administration (PRLA) is located inside the maritime enclave of the project. The dredging operation will improve the vessels traffic inside the San Juan Harbor.

Nonetheless the above, the proposed action to dispose of highly contaminated dredged material inland raises some concerns. First, pumping the sediments a relatively large distance through a meandering and highly shallow inland water course as the Martin Peña Channel, will place the banking areas at risk of contamination at possible pump and pipeline breaks and/or disruptions. Second, the Contained Aquatic Disposal (CAD) device is not described in your letter. But even though a high degree of safe-proofing may be achieved with the CAD system, not that high a volume of hazardous wastes as the one proposed (300,000 cyds.) shall be placed in a ecologically sensitive area as the San Jose Lagoon. If the CAD system permits, the hazardous wastes may be disposed of in deeper waters in the ocean.

If you have any questions concerning this letter, please do not hesitate to contact Mr. Juan L. García Uriarte, Engineer Director at (787) 753-9300 extension 226.

Sincerely,

Juan Vaquer Castrodad
Executive Director

PO BOX 363767 • SAN JUAN, PR 00936-3767 • #171 AVE. CARLOS CHARDON, SUITE 101 • SAN JUAN, PR 00918-0903 • T. 753-9300 • F. 250-7150 • WWW.TERRENOS.PRSTAR.NET

United States Department of Agriculture | Forest Service | International Institute of Tropical Forestry
Tel: (787) 766-5335 | P.O. Box 25000 San Juan PR 00928 Fax: (787) 766-6263

File Code: 1900
Date: June 25, 2002

Ivonne Haberer
Planning Division
Environmental Branch
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Ms. Haberer:

This is in response to a request from your office for information concerning the Environmental Assessment for maintenance dredging of San Juan Bay. We recognize the importance of San Juan Bay for Puerto Rico and the United States and have no objections to the maintenance dredging. However, we are concerned about the level of expenditures that the US government invests in maintenance dredging while also investing in activities upstream that produce excessive sedimentation, increases maintenance costs, and forces the federal government to invest huge quantities of money for maintenance activities such as this dredging. Accordingly, we recommend an economic analysis of the cost/benefits of all federal activities on the San Juan Bay watershed with a view of coordinating activities that would save money to taxpayers in the United States.

For example, the Army Corps of Engineers constantly approves projects that involve burying stream channels (for construction) and redirecting water flows through culverts that are of questionable effectiveness in the context of our tropical conditions. Thanks to these--and many other developments subsidized by federal funds (for example for infrastructure or with regulations that allow less rigorous environmental constraints on constructions activities in Puerto Rico)--the water flows to the San Juan Bay during storm periods are sediment-laden to a degree that is manifold what would be naturally expected. So, the federal and commonwealth governments subsidize the construction industry by facilitating its infrastructure, eliminating accountability for environmental protection, and picking up the tab for removing the high sediment and pollution loads that accumulate on San Juan Bay (and in fact all throughout the coast of Puerto Rico). On a long-term basis, the federal government is allowing for the over-development of Puerto Rico and making this development dependent on the federal treasury. Puerto Rico has no resources to assume the incredible financial burden of maintaining such a vulnerable infrastructure.

As we pour more money into this system, it is wise to analyze the direction it is heading and the consequences of no action.

I look forward to your analysis, and thank you for allowing us to comment.

Sincerely,

ARIEL E. LUGO
Director

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
Caribbean Area State Office
P.O. Box 364868
San Juan, PR 00936-4868
Tel. 787-766-5206
Fax. 787-766-5987

June 5, 2002

Mr. James C. Duck
Planning Division
Environmental Branch
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Duck:

SUBJECT: DEA FOIA- San Juan Harbor Federal Navigation Project, San Juan, PR

After a thorough review of above named EA report, we have no environmental concerns to express.

For more information please contact Félix A. Latorre, Water Resources Planning Specialist, at (787) 766-5206, Ext. 234.

Sincerely,

JUAN A. MARTÍNEZ
Director

San Juan Bay Estuary Program

August 7, 2002

Ms. Yvonne Haberer
Planning Division – Environmental Branch
Jacksonville District
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, Fl 32232-0019

Dear Ms. Haberer:

This letter is in response to the US Army Corps of Engineers (USACE) request for information, related to the scoping of the Environmental Assessment for the San Juan Harbor Graving Dock Turning Basin & Berthing Areas 15 and 16 Maintenance Dredging Project. The San Juan Bay Estuary (SJBE) Program Office met with personnel from the PR Department of Natural and Environmental Resources (DNER) to discuss which information should be presented in the Environmental Assessment (EA). The SJBE Program recommends that the following issues be included as part of the EA:

1. Dredging: The EA should discuss which measures will be implemented to reduce sediment resuspension and contaminant bioavailability during dredging operations at the Graving Dock Turning Basin & Berthing Areas 15 and 16. Among these, the EA should mention which type of hydraulic dredge (i.e. cutterhead dredge, horizontal auger dredge) will be used, since the amount of sediments lost during dredging operations, due to the space between the cutterhead and the pump suction head, will vary depending on the type and the production rate of the hydraulic dredge system employed. Other operational controls that can be considered to reduce sediment and pollutant resuspension, and that can be part of the discussion, include: the placement of silt curtains; reducing cutterhead rotation speed; slowing dredgehead movement; increasing suction rate; and, slowing the movement and placement of spud piles and swing anchors.

2. Transport of Dredged Material: The proposed project will involve pumping of all dredged material through a pipeline along the entire length of the Martín Peña Channel and most of the San José Lagoon, to its final disposal into an artificial depression in the lagoon's bottom. This depression will be converted to a contained aquatic disposal (CAD) facility. The EA should describe the precise route along which the pipeline and booster pumps would be located, including information such as if these will be supported by floats or submerged on the bottom of the Martín Peña Channel and the San José Lagoon, or routed over land along the fringes of these water bodies. We recommend that the USACE consider the placement of the pipeline over land, on the segment along the southern edge of the eastern half of the Martín Peña Channel. The pipeline would be limited to the north by the mangroves fringing the Channel and by a jogging trail and unmantained green areas to the south. On several sites along this

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route, some wood and zinc dwellings are found, but these are scheduled for removal as part of the proposed dredging works for the Martín Peña Channel. The USACE should coordinate with the PR Highway Authority and the Municipality of San Juan the timeframe for the relocation of these structures, which would also include all of those east of the Barbosa Avenue fringing the Channel and that belong to the Israel and Bitumul communities, as well as any possible conflicts with the construction of the new Barbosa Avenue Bridge.

We believe the EA should also discuss which measures will be in place to reduce the possibility of pipeline leakage, such as employing pipeline leak-tight joints and connectors, as well as those remedial actions that would be taken to correct and mitigate any accidental sediment spills. The EA should present what measures will be implemented to avoid the escape of sediments if there is a need to disassemble a pipeline or booster pump for flushing, in case these become clogged or suffer any malfunction.

3. Selection of Disposal Site: The EA should discuss which alternatives were evaluated for the disposal of the dredged material, and the rationale for the selection of the artificial depression located on the southeast corner of the San José Lagoon. We recommend that the EA consider the artificial depression found at the northwest embayment of the San José Lagoon, known also as Los Corozos Lagoon, as an alternative for a disposal site. This depression has a maximum depth of approximately 28 feet and has a more regular, "cup" shape, possibly making it more suitable for its conversion into a CAD, than the one that has been preliminarily selected. The recommended site at Los Corozos Lagoon would be closer to the dredging area at the San Juan Bay, requiring approximately 1,000 meters less of pipeline to transport the dredging material for disposal. The volumetric capacity of Los Corozos Lagoon depression would have to be calculated, to determine if this site would be suitable to dispose of all of the approximately 300,000 cubic yards of material that would be dredged from the proposed areas.

   Finally, the EA should provide information about the benthic flora and fauna, and any other biological resources found in the water column, in the area that is finally selected for the disposal of the dredged material. A Benthic Assessment Study was performed by the National Marine Fisheries Service (NMFS) on behalf of the SJBE Program, to determine the spatial distribution of benthic communities, the area extent, the species composition and their density within the SJBE. The information provided in this study could be useful for the characterization of the benthic organisms that might be affected by the proposed dredging and CAD creation activities. The final report of this study will be available for spring 2003. The SJBE Program Office has also other reports documenting the environmental condition (i.e. water and sediment quality) and the biological resources (i.e. zooplankton, nekton, macrobenthos) of the San Juan Bay and the San José and Los Corozos lagoons, which can be available to the USACE for review upon request.

4. Cap Design: The EA should provide detailed information regarding the thickness, characteristics and the source of the material for capping the proposed CAD, including a description on how it will be placed to assure the isolation of the contaminated sediments from the benthic and aquatic environment, and how its long term integrity would be maintained or guaranteed. Thus, the cap should be designed to account for bioturbation,

erosion, consolidation and long term chemical isolation. The performance criteria related to cap design must be tied to suitable design objectives that the cap is intended to meet. The EA should justify the final cap design by providing information derived from laboratory analysis that test for cap material consolidation and isolation effectiveness, and modeling studies that evaluate its erosion potential and the settlement of the dredged material.

5. Disposal of Dredged Material: The contaminated materials must be placed in the selected CAD pit, so that water column impacts from releases of contaminants during placement are acceptable. Available field data on conventional open water disposal operations indicates that the total amount of dredged material dispersed in the upper water column and transported long distances from the placement area is one (1) to five (5) percent of the original mass of material.[1] Therefore, the EA should present a thorough discussion of the measures that will be implemented to reduce sediment resuspension and dispersion, including but not limited to: placement method (i.e. diffusers); placement of silt curtains; placement of dredged material into geosynthetic fabric containers (GFCs); sheetpiles and floating booms; as well as which factors were considered for the selection of these or any other measures evaluated.

   The sediments to be dredged from the Graving Dock Turning Basin & Berthing Areas 15 and 16 are contaminated with heavy metals, polyaromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs). The EA should present the specific concentrations at which these pollutants were found in the sediments and their exceedance over established standards. The EA should account for the possible temporary increase in the volatilization of some of these contaminants from the water column to the air during the deposition of the dredged material. In the case of PCBs, volatilization involves desorption from the suspended solids phase, diffusion through the water column, and transport through the water-air interface. The extent of volatilization would depend on the magnitude of resuspension, concentration and vapor pressure of PCBs, and prevailing temperature and wind. We recommend that an air-monitoring program be considered for implementation, to test for those pollutants that could volatilize, since between 40% to 50% of the PCBs entering the water column can volatilize during dredging activities.[2] Finally, we recommend that USACE defines in the EA the location of a mixing zone for the proposed disposal activities, defined as the point of compliance with water quality standards or biological standards tied to the potential water column release associated with placement operations at the disposal site.

6. Monitoring: The EA should discuss a monitoring program designed to measure the effects of sediment resuspension on the dredging site and the disposal area, to ensure compliance with prevailing water quality standards and those set by the proposed project. Monitoring should be provided before, during and following the placement of the contaminated materials and final cap, to insure that water column dispersion is within acceptable limits and that an effective cap has been constructed. Palermo, M. R., 1997, recommends that monitoring to assure that the placement of dredged material occurs as designed, includes water column sampling, baseline conditions, post-contaminated material placement, interim, and post cap

[1] Palermo, M. R., 1997. *Contained Aquatic Disposal of Contaminated Sediments in Subaqueous Borrow Pits.* Presented at Western Dredging Association XVIII Annual Meeting, 29 Jun - 2 July 1997, Charleston, S.C.

[2] Cushing, B. S., 1998. *The limits of dredging as a feasible technology for contaminated sediment removal.* Water Environment & Technology, June 1998.

material placement precision bathymetric surveys, as well as sediment profile image (SPI) surveys. Long term monitoring may include sequential bathymetric and SPI surveys or diver inspected settling plates to determine changes in material thickness, surface sediments chemistry samples, sediment and pore water chemistry profiles from cores, sediment physical structure from cores, benthic community structure, and contaminant tissue concentrations of resident benthic species. A monitoring program to avoid any impacts over species of concern, such as federally endangered species, should be implemented as part of the proposed project. We recommend that the same protocol used for the Phase II of the San Juan Harbor Deepening and Blasting Activities Project be followed. Manatees have been observed on a regular basis on the San Juan Bay and in the Puerto Nuevo River Channel, the latest located in the vicinity of the proposed dredging site.

Thank you for the opportunity to comment on this action. If you have any questions, please do not hesitate to contact me or Mr. Mario Tacher and Mr. Luis Jorge Rivera Herrera from my staff, at 787-725-8162, or by e-mail at Mario.Tacher@saj02.usace.army.mil, or Luis.J.Rivera-Herrera@saj02.usace.army.mil.

Cordially,

Agustín F. Carbó Lugo, Esq.
Executive Director

MTR/LJRH/ljrh

c: Mr. Gerardo Irizarry, Department of Environmental Management, Municipality of Carolina
Mrs. Giovanna Fuentes, Chair, Implementation Committee, SJBE Partnership, DNER
Mr. James P. Oland, Field Supervisor, US Fish and Wildlife Service
Mr. José Soto, Life Scientist, US Environmental Protection Agency
Mr. Julio A. Toro Mc. Cown, Technical Assistant, Deputy Secretary for Planning, DNER
Mrs. Lourdes Bernier, Technical Assistant, Water & Mineral Resources Area, DNER
Mrs. Ivonne Santiago, Director, Water Quality Area, PR Environmental Quality Board
Dr. Michael Szendrey, Chair, Scientific & Technical Advisory Committee, SJBE Partnership
Arq. Roberto Alsina, Executive Director, Department of Urbanism, Municipality of San Juan
Mr. Ramón Lloveras, Esq., Chair, Board of Directors, SJBE Partnership

COMMONWEALTH OF PUERTO RICO
DEPARTMENT OF EDUCATION

AREA FOR PLANNING AND EDUCATIONAL DEVELOPMENT

July 11, 2002

Mr. James C. Duck
Chief, Planning Division
Department of the Army
Jacksonville District of Engineers
P. O. Box 4970
Jacksonville, Florida 32232 - 0019

Attention: Mrs. Ivonne Haberer
Planning Division
Environmental Branch

Dear Mr. Duck:

We received your letter, regarding the Environmental Assesment being prepared for maintenance dredging in San Juan Harbor, San Juan, Puerto Rico.

We consider this a very important proyect in this area and have our endorsement under the following conditions:

- The access to any school along the route should not be affected.
- The teaching – learning process would not be affected.
- Materials being dredged from the proposed areas will not affect the health of the school community.

Cordially,

Ángel L. Canales Encarnación
Acting Assistant Secretary

ALCE/ar/aeg

P.O. BOX 190759, SAN JUAN, PUERTO RICO 00919-0759 φ PHONE.: (787) 759-2000, EXTS.: 3289, 3291 φ FAX: (787) 751-2874

COMMONWEALTH OF PUERTO RICO

HIGHWAY AND TRANSPORTATION AUTHORITY

July 30, 2002

Mr. James C. Duck
Chief, Planning Division
Department of The Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

ENVIRONMENTAL ASSESSMENT (EA) FOR MAINTENANCE DREDGING IN SAN JUAN HARBOR, PUERTO RICO

Dear Mr. Duck:

Reference is made to your letter dated June 4, 2002, related to this matter.

At present the Construction Improvement Program of this Authority includes the following projects in the reference area:

1. AC-000140 – Geometric Improvement on PR-1, Muñoz Rivera Expressway, from Km 5.4 with Intersection PR-2 to Martín Peña Channel, Km 7.9.

2. AC-100209 – Improvements to Muñoz Rivera Expressway and Access to Miramar Marine Front, Included an Overpass from Muñoz Rivera Expressway to Miraflores and Villa Verde Streets, Pavement Rehabilitation, Geometric and Bridges Improvements.

3. AC-100217 – Bridge Replacement #675, Km 7.85 Over Martín Peña Channel.

4. AC-002528 – Bridge Replacement #185, Km 8.0 Over Martín Peña Channel, Alternatives Study.

5. AC-002721 – Bridge Replacement #87, Over Martín Peña Channel, PR-27, Km 2.4.

The reference project should be coordinated with our projects. For additional information please contact the Design Area at 787-721-8787, extention 1401, or our Office of Highway Systems at 787-721-8787, extention 1512.

Cordially,

Irma M. García
Director
Planning Area

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0206144001031

APPENDIX D – CAD DESIGN, REPORT BY USACE WES

Revised San Juan CAD Design – Calculation of CAD Pit Parameters for Hydraulic Dredging with Pipeline Discharge into Disposal Area #2

An investigation of the cap design was performed for the confined aquatic disposal (CAD) of the unsuitable dredged material from the Graving Dock area of the San Juan Harbor into Disposal Area #2 in the San Jose Lagoon, using "clean" material from the Cruise Ship Basin for the cap. The original calculations for pit 2 were revised in order to provide a range of possible dredging parameters. The range of parameters studied within this investigation is shown below in Table 1. The original in situ sediment volume estimate is 200,000 cubic yards, although larger volumes could be anticipated due to shoaling and overdredge, and thus volumes up to 300,000 cu. yd were included. Due to the long distance from the dredging site to the pit and the associated use of booster pumps, production (effective pumping time) will be significantly reduced. Production rates are expected to be as low as 35%, achieving at most 50%. As with the original calculations, it is assumed that a submerged diffuser will be used to provide 90% or better hydraulic efficiency, thereby reducing the area required for clarification. A submerged diffuser will also allow better placement of material and will reduce sediment dispersion in the water column.

Table 1. Range of Dredging Parameters Investigated

In-Situ Volume cu yd.	Dredge Sizes (in.)	Average Pipeline Velocities (fps)	Production Rates (%)	Solids Content (g/l)
200,000	16	10	35 %	95
225,000	18	12	50 %	115
250,000	21	15		135
300,000	24			
	27			
	30			

Due to volume limitations within the pit, the dredging parameters must be limited such that the material is confined below the pit lip at –12 ft elevation. Typically, determination of the elevation over time is computed/modeled using the Primary Consolidation, Secondary Compression, and Desiccation of Dredged Fill (PSDDF) model which takes into consideration the initial fill volume computed from laboratory compression settling data (SETTLE program) and the void ratio vs. effective stress and permeability relationships generated from curve-fitted laboratory consolidation tests (REDUCE program). However, in this instance, the PSDDF model did not appear to correctly model the process, since the model predicted far less consolidation than that observed during laboratory testing. This occurred because PSDDF is more suited to model long-term consolidation, rather than short-term processes where there is minimal initial effective stress. Furthermore, the permeability vs. void ratio relationship for the Graving Dock sediment that was originally generated by the curve-fitting program, REDUCE, predicted much lower permeabilities than those observed in the laboratory. The correlation generated by REDUCE appeared incorrect for the fine-grained sediment in the range of higher void ratios. Therefore, instead, one point was hand-calculated for a large void ratio, then the remaining values were linearly estimated between that point and the lower void ratios (from the oedometer range of values which appeared to be correct).

Therefore, an alternative method was used to estimate the filling and consolidation of the unsuitable and capping dredged material for this project. For the short-term, the compression settling equations were used to make predictions about the filling and consolidation over the range of dredging parameters. These predictions include the initial volume and elevation of unsuitable material upon filling, the required initial cap thickness (assuming a final cap thickness of 1.75 ft), the maximum elevation of material (immediately after cap placement), and the unsuitable and cap material thicknesses at 6 months (or 1 year, depending on time to fill). The 1.75-ft minimum cap thickness was based on the following assumptions for individual thickness components:

- 1 ft to account for bioturbation,